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09/772,176	01/29/2001	James A. Proctor JR.	TAN-2-1508.01.US	1093

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EXAMINER	
BURD, KEVIN MICHAEL	

ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eoffice@volpe-koenig.com

Office Action Summary	Application No.	Applicant(s)	
	09/772,176	PROCTOR, JAMES A.	
	Examiner	Art Unit	
	Kevin M. Burd	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 November 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1,2,5-14,16,17,19,21,22,25-36,39 and 42-61* is/are pending in the application.

5a) Of the above claim(s) *44-57,60 and 61* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,2,5-14,16,17,19,21,22,25-36,39,42,43,58 and 59* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application.
6) ☐ Other: _____.

1. This office action, in response to the amendment filed 11/10/2011, is a final office action.

Election/Restrictions

2. Newly submitted claims 44-57, 60 and 61 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

This application contains claims directed to the following patentably distinct species:

Figures 3 and 4 disclose a method of adjusting a parameter according to a detected motion of a communication device. This species corresponds to claims 1, 2, 5-14, 16, 17, 19, 21, 22, 25-36, 39, 42, 43, 58 and 59.

Figure 8 discloses a correlation system for adjusting a signal in a delay lock loop. This species corresponds to claims 44-55.

Figure 6A discloses an AGC circuit that produces an amplitude variance signal. This species corresponds to claims 56 and 57.

Figure 7 discloses a phase lock loop circuit for altering a frequency. This species corresponds to claims 60 and 61.

The species are independent or distinct because the inventions as claimed have materially different design, mode of operation, function or effect. The inventions are mutually exclusive. Each species requires separate search and classification. In

addition, these species are not obvious variants of each other based on the current record.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 44-57, 60 and 61 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

3. Applicant's arguments filed 11/10/2011 have been fully considered but they are not persuasive. Applicant states Yamashita does not discloses the instantaneously detecting motion based on a measurement of a metric of a modulated signal comprised of at least one of amplitude, phase or frequency of the wireless signal. The examiner disagrees. As stated in the previous rejection of the claims, Yamashita discloses measuring the field intensity (RSSI) of the received channel. This field intensity of the received signal corresponds to the amplitude of the wireless signal. Applicant states the method of claim 1 may determine the relative motion even in the absence of fading. However, the limitation argued is not recited in claim 1. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the method of claim 1 may determine the relative motion even in the absence of fading) are not recited in the rejected claims. Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant states the examiner fails to address the specifics of claims 8-13, 16 and 17. The examiner disagrees. Claim 1 recites a measure of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal, frequency of the wireless signal or phase of the wireless signal and selecting a parameter adjustment of at least one of an antenna mode, a power level, a forward error correction coding rate, a number of modulation symbols and a data transfer rate. The rejection of claim 1 addresses at least one of these limitations as required by the recited limitations, in this case, amplitude and power level. Since only one of each of these limitations is required by the recited claim, the other limitations are optional but are not required. The dependent claims further limit the optional but not required limitations.

For these reasons and the reasons stated in the previous office action, the rejections of the claims are maintained and stated below. Newly added claims 43, 58 and 59 are addressed below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 8-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al (US 6,862,457) in view of Yamashita (US 6,256,500).

Regarding claims 1 and 2, Sarkar discloses a method for adaptively controlling the power levels of transmission from a remote station by determining the velocity of the remote station (abstract). The velocity can be determined by the remote station through various methods (abstract). The velocity of the remote station is determined (figure 4, block 401 and claim 9). By determining the velocity of the remote station, the instantaneous motion of the remote station is detected. Based on the velocity estimate, a power level will be selected and adjusted (figure 4 and column 7, lines 49-61). In addition, claim 9 of the reference recites "a method for adaptively controlling transmission power levels…".

Sarkar does not disclose the velocity is based on a measurement of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal, frequency of the wireless signal or phase of the signal. However, there are numerous methods of determining the velocity or speed of a mobile unit. Yamashita discloses one of those methods. Yamashita detects the moving speed of the mobile station according to the fading state of the received signal (column 3, lines 50-65). The mobile station receives a control channel from the relevant radio base station, detects the fading state thereof and determines that the mobile station is moving at a high speed when the fading rate is high (column 4, lines 24-32). The fading rate is determined by measuring the field intensity (RSSI) of the received channel and detecting fluctuation levels per predetermined time in a multipath transmission environment (column 5, lines 60-64 and

column 6, lines 13-18). This field intensity of the received signal corresponds to the amplitude of the wireless signal. Yamashita provides an accurate method of calculating a mobile station's speed. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the speed determination means of Yamashita for the speed determining means of Sarkar since the speed determining means will operate in substantially the same manner and the combination will yield predictable results. In addition, Yamashita discloses, through the use of the speed determining means, the number of handoffs can be decreased and the available channels can be effectively used (column 8, lines 28-33).

Regarding claims 8-13, the combination of Sarkar and Yamashita discloses the method stated above. MPEP 2111.04 discloses claim scope is not limited by steps that suggests or makes optional but does not require steps to be performed. Calculating the metric based on a frequency error signal or a phase error signal as recited in these dependent claims are optional limitations since different modulated signal attributes are met by the reference.

Regarding claim 14, Yamashita discloses the speed detection includes comparing the RSSI to a threshold (column 5, line 51 to column 6, line 13).

Regarding claims 16 and 17, the combination of Sarkar and Yamashita discloses the method stated above. MPEP 2111.04 discloses claim scope is not limited by steps that suggests or makes optional but does not require steps to be performed. Selecting the parameter adjustment of an antenna mode as recited in these dependent claims are optional limitations since different parameter adjustments are met by the reference.

5. Claims 1, 2, 8-14, 16, 17, 19, 21, 22, 28-36, 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (US 6,618,596) in view of Yamashita (US 6,256,500).

Regarding claims 1, 2, 21, 22 and 42, Uchida discloses a mobile communication terminal that measures a moving speed of the mobile and changes a data transfer rate in accordance with the moving speed of the mobile (claim 1). The moving speed of the mobile is measured and stored (column 4, lines 41-56). The current moving speed is input to the moving speed maximum data transfer rate correspondence table as shown in figure 2. A lower one of the desired data transfer rate and maximum data transfer rate is selected (column 5, lines 3-10) and the selected transfer rate is input to an origination request message in the signal format shown in figure 3 (column 5, lines 11-15). The base station receives the origination request message supplied from the mobile terminal and communicates with the mobile terminal at the data transfer rate written in the data transfer rate designation field (column 5, lines 20-23).

Uchida does not disclose the moving speed is based on a measurement of a metric of a modulated signal attribute comprised of at least one of amplitude of the wireless signal, frequency of the wireless signal or phase of the wireless signal. However, there are numerous methods of determining the speed of a mobile unit. Yamashita discloses one of those methods. Yamashita detects the moving speed of the mobile station according to the fading state of the received signal (column 3, lines 50-65). The mobile station receives a control channel from the relevant radio base station, detects the fading state thereof and determines that the mobile station is moving at a

high speed when the fading rate is high (column 4, lines 24-32). The fading rate is determined by measuring the field intensity (RSSI) of the received channel and detecting fluctuation levels per predetermined time in a multipath transmission environment (column 5, lines 60-64 and column 6, lines 13-18). This field intensity of the received signal corresponds to the amplitude of the wireless signal. Yamashita provides an accurate method of calculating a mobile station's speed. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the speed determination means of Yamashita for the speed determining means of Uchida since the speed determining means will operate in substantially the same manner and the combination will yield predictable results. In addition, Yamashita discloses, through the use of the speed determining means, the number of handoffs can be decreased and the available channels can be effectively used (column 8, lines 28-33).

Regarding claims 8-13 and 28-33, the combination of Uchida and Yamashita discloses the method stated above. MPEP 2111.04 discloses claim scope is not limited by steps that suggests or makes optional but does not require steps to be performed. Calculating the metric based on a frequency error signal or a phase error signal as recited in these dependent claims are optional limitations since different modulated signal attributes are met by the reference.

Regarding claims 14 and 34, Yamashita discloses the speed detection includes comparing the RSSI to a threshold (column 5, line 51 to column 6, line 13).

Regarding claims 16, 17, 35 and 36, the combination of Uchida and Yamashita discloses the method stated above. MPEP 2111.04 discloses claim scope is not limited by steps that suggests or makes optional but does not require steps to be performed. Selecting the parameter adjustment of an antenna mode as recited in these dependent claims are optional limitations since different parameter adjustments are met by the reference.

Regarding claims 19 and 39, by lowering the data transfer rate, the number of symbols transmitter will be reduced.

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al (US ,862,457) in view of Yamashita (US 6,256,500) further in view of Watanabe (US 2001/0041584).

Regarding claims 5-7, the combination of Sarkar and Yamashita discloses the method and apparatus stated above. The combination does not disclose an automatic gain control loop is found in the receiver. Watanabe discloses a CDMA receiver that includes the AGC amplifier 37A in figure 1. The AGC amplifier is provided for amplifying the received signal to a desired signal level, in which its gain may automatically be controlled to optimum so that the received power may become as minimal as necessary depending on the distance from the base station (paragraph 0066). Therefore, the receiver will increase the received signal level as the distance between the receiver and the base station increases so the signal can be received and processed correctly. This variable gain control will further minimize errors in the received signal. For these

reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the AGC amplifier of Watanabe into the receiver and method of the combination of Sarkar and Yamashita.

7. Claims 5-7 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (US 6,618,596) in view of Yamashita (US 6,256,500) further in view of Watanabe (US 2001/0041584).

Regarding claims 5-7 and 25-27, the combination of Uchida and Yamashita discloses the method and apparatus stated above. The combination does not disclose an automatic gain control loop is found in the receiver. Watanabe discloses a CDMA receiver that includes the AGC amplifier 37A in figure 1. The AGC amplifier is provided for amplifying the received signal to a desired signal level, in which its gain may automatically be controlled to optimum so that the received power may become as minimal as necessary depending on the distance from the base station (paragraph 0066). Therefore, the receiver will increase the received signal level as the distance between the receiver and the base station increases so the signal can be received and processed correctly. This variable gain control will further minimize errors in the received signal. For these reasons, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine the AGC amplifier of Watanabe into the receiver and method of the combination of Uchida and Yamashita.

8. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al (US 6,862,457) in view of White et al (US 6,531,982).

Regarding claim 43, Sarkar discloses a method for adaptively controlling the power levels of transmission from a remote station by determining the velocity of the remote station (abstract). The velocity can be determined by the remote station through various methods (abstract). The velocity of the remote station is determined (figure 4, block 401 and claim 9). By determining the velocity of the remote station, the instantaneous motion of the remote station is detected. Based on the velocity estimate, a power level will be selected and adjusted (figure 4 and column 7, lines 49-61). In addition, claim 9 of the reference recites “a method for adaptively controlling transmission power levels…”.

Sarkar does not disclose the velocity is based on a measurement of a metric of a modulated signal attribute based of a phase change of the wireless signal. However, there are numerous methods of determining the velocity or speed of a mobile unit. White discloses the velocity and position of a mobile terminal is computed using satellite information (column 7, lines 62-67) and the satellite information is generated from the integrated delta f information from the phase rotation unit 120. The phase rotation unit 120 accounts for the phase errors due to Doppler shift (column 7, lines 30-37). The error in the processor generates the f parameter (column 7, lines 43-46). Delta f is accumulated in carrier NCO 122, but the accumulator values are integrated as the instantaneous phase angles of the outputs of the carrier NCO 122 (column 7, lines 48-51). Phase is the time integral of frequency. This information is use to determine the

position and velocity of the mobile. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the velocity determining means of White for the velocity determining means of Sarkar since the speed determining means will operate in substantially the same manner and the combination will yield predictable results.

9. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (US 6,618,596) in view of White et al (US 6,531,982).

Regarding claim 43, Uchida discloses a mobile communication terminal that measures a moving speed of the mobile and changes a data transfer rate in accordance with the moving speed of the mobile (claim 1). The moving speed of the mobile is measured and stored (column 4, lines 41-56). The current moving speed is input to the moving speed maximum data transfer rate correspondence table as shown in figure 2. A lower one of the desired data transfer rate and maximum data transfer rate is selected (column 5, lines 3-10) and the selected transfer rate is input to an origination request message in the signal format shown in figure 3 (column 5, lines 11-15). The base station receives the origination request message supplied from the mobile terminal and communicates with the mobile terminal at the data transfer rate written in the data transfer rate designation field (column 5, lines 20-23).

Uchida does not disclose the moving speed is based on a measurement of a metric of a modulated signal attribute based of a phase change of the wireless signal. However, there are numerous methods of determining the speed of a mobile unit. White

discloses the velocity and position of a mobile terminal is computed using satellite information (column 7, lines 62-67) and the satellite information is generated from the integrated delta f information from the phase rotation unit 120. The phase rotation unit 120 accounts for the phase errors due to Doppler shift (column 7, lines 30-37). The error in the processor generates the f parameter (column 7, lines 43-46). Delta f is accumulated in carrier NCO 122, but the accumulator values are integrated as the instantaneous phase angles of the outputs of the carrier NCO 122 (column 7, lines 48-51). Phase is the time integral of frequency. This information is use to determine the position and velocity of the mobile. It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the velocity determining means of White for the velocity determining means of Uchida since the speed determining means will operate in substantially the same manner and the combination will yield predictable results.

10. Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al (US 6,862,457) in view of Mori (US 6,330,446).

Regarding claims 58 and 59, Sarkar discloses a method for adaptively controlling the power levels of transmission from a remote station by determining the velocity of the remote station (abstract). The velocity can be determined by the remote station through various methods (abstract). The velocity of the remote station is determined (figure 4, block 401 and claim 9). By determining the velocity of the remote station, the instantaneous motion of the remote station is detected. Based on the velocity estimate,

a power level will be selected and adjusted (figure 4 and column 7, lines 49-61). In addition, claim 9 of the reference recites “a method for adaptively controlling transmission power levels…”.

Sarkar does not disclose the velocity is based on a measurement of a metric of a modulated signal attribute based of a frequency change of the wireless signal. However, there are numerous methods of determining the velocity or speed of a mobile unit. This fact is recited by Mori in column 1, lines 56-60. Mori states “the velocity of a mobile terminal can be determined in various ways: for example, from positional information provided by the base station within range of the mobile terminal, or by sensing the Doppler shift in a carrier frequency.” It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the velocity determining means of Mori for the velocity determining means of Sarkar since the speed determining means will operate in substantially the same manner and the combination will yield predictable results. In addition, Mori discloses, regularly transmitted communication can be optimized when accurate velocity measurements can be made (column 1, lines 23-36 and 49-55).

11. Claims 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (US 6,618,596) in view of Mori (US 6,330,446).

Regarding claims 58 and 59, Uchida discloses a mobile communication terminal that measures a moving speed of the mobile and changes a data transfer rate in accordance with the moving speed of the mobile (claim 1). The moving speed of the

mobile is measured and stored (column 4, lines 41-56). The current moving speed is input to the moving speed maximum data transfer rate correspondence table as shown in figure 2. A lower one of the desired data transfer rate and maximum data transfer rate is selected (column 5, lines 3-10) and the selected transfer rate is input to an origination request message in the signal format shown in figure 3 (column 5, lines 11-15). The base station receives the origination request message supplied from the mobile terminal and communicates with the mobile terminal at the data transfer rate written in the data transfer rate designation field (column 5, lines 20-23).

Uchida does not disclose the moving speed is based on a measurement of a metric of a modulated signal attribute based of a frequency change of the wireless signal. However, there are numerous methods of determining the speed of a mobile unit. This fact is recited by Mori in column 1, lines 56-60. Mori states “the velocity of a mobile terminal can be determined in various ways: for example, from positional information provided by the base station within range of the mobile terminal, or by sensing the Doppler shift in a carrier frequency.” It would have been obvious for one of ordinary skill in the art at the time of the invention to provide the simple substitution of the velocity determining means of Mori for the velocity determining means of Uchida since the speed determining means will operate in substantially the same manner and the combination will yield predictable results. In addition, Mori discloses, regularly transmitted communication can be optimized when accurate velocity measurements can be made (column 1, lines 23-36 and 49-55).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hermansson et al (US 5,987,319) discloses the speed of the mobile is determined by detecting the Doppler radio frequency shift as recited in column 5, lines 27-32 and claim 10.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571)272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin M. Burd/
Primary Examiner, Art Unit 2611
1/4/2012